

Why Does *Yu* 湯 Mean 'Hot Water' ?

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A unique feature of the Japanese lexicon is the word *yu* 湯 which means 'hot water'. In most languages, 'hot water' is expressed with a combination of the words for 'hot' and 'water'; for example, English *hot water*, French *eau chaude*, Spanish *agua caliente*, German *heisses Wasser*, Chinese *rèshuǐ* 熱水, or Russian горячая вода. However, the Japanese word *mizu* 水 'water' cannot be modified with any words for 'hot'; for example, **atsui mizu* 熱水 (literally "hot water") is not acceptable, but *atsui-yu* 熱湯 (literally "hot hot water") is acceptable and means 'very/scalding hot water'. This word *yu* 湯 has some peculiarly Japanese semantics and syntax.

1. THE WORD *YU* 湯

1.1 The Semantics of *Yu*.

The *Nihon Kokugo Daijiten* 日本国語大辞典 (Shogakukan 1976) lists these eight meanings (and earliest recorded usages) for *yu* 湯:

- (1) 'hot water' [late 7th or early 8th century]
- (2) '(hot) bath' [mid 10th century]
- (3) 'hot spring' [early 8th century]
- (4) 'medicated bath' [late 10th century]
- (5) 'decoction, infusion' [late 10th century]

* Thanks go to Paul Benedict, Terry Carr, Takahashi Toshimitsu, and Takai Osamu for commenting on an early version of this paper.

- (6) 'bilge water' [early 11th century]
 (7) 'molten metal' [late 16th century]
 (8) 'urine' [no date given]

The basic meaning of (1) 'hot water' was semantically extended to the other meanings. Thus, (2) '(hot) bath, bathing' is an important use of 'hot water'; (3) 'hot spring' is a natural source of 'hot water'; and both (4) 'medicated bath' [a special type of (2) 'bath'] and (5) 'decoction, infusion' are medicinal uses of 'hot water'. The semantic relation with (6) 'bilge water' [cf. the English *take in water*] is not certain, it is said to have been a taboo word. The sense of (7) 'molten metal (for casting)' is probably a generalization of 'hot water' to a sense of 'hot liquid'. And the slang (8) 'urine' [cf. the English *pass water* or *make water*] is apparently a modern extension of meaning.¹⁾

1.2 The Morphology of Yu

There are a number of words based upon *yu* 'hot water', and most of these morphological forms are associated with the basic meanings of (1) 'hot water', (2) 'hot bath', and (3) 'hot springs'.

The first meaning of 'hot water' is the most common morphological basis of *yu*-words. Besides words for 'hot water' itself (e.g., *yu-dama* 湯玉 'bubbles in boiling water') mentioned in 1.4, there are words related with foods, drinks, and utensils. Examples for foods are *omo-yu* 重湯 (lit. "heavy hot water") 'rice water; gruel'²⁾, *yu-dofu* 湯豆腐 'boiled beancurds', *yuba* 湯葉 'dried bean-curd', and *kotsu-yu* 骨湯 'fish-bone soup'. Some *yu*-words for hot drinks are *sayu* 白湯 (lit. "white hot

1) The English *make water* usually means 'urinate' as in meaning (8), but it can also mean 'take in bilge water' as in (6). Note the phonological similarity between *yu* 湯 and *yubari* 尿 'urine'. The character 尿 is ideographically composed of 尸 'corpse, body' and 水 'water'.

2) Cf. *jusui* 垂水 (lit. "heavy water") 'heavy water, D₂O'.

water") '(plain) hot water, boiled water', and *ocha-no-yu* お茶の湯 'hot water for tea; tea ceremony'. And some utensil names with *yu* are *yu-nomi* 湯呑 'teacup, mug', *yu-wakashi* 湯沸かし 'tea kettle; water heater', and *yu-gama* 湯釜 'caldron, kettle'.

The second meaning of 'hot bath' for *yu* is usually expressed with the more common names of *furo* 風呂 'hot bath; public bath' or *sentō* 銭湯 'public bath'. There are a variety of words with *yu* that refer to baths and bathing; such as *yu-ya* 湯屋 'public bathhouse', *yusen* 湯銭 'bathhouse charge', *koshi-yu* 腰湯 'hip/sitz bath', *asa-yu* 朝湯 'morning bath',³⁾ *yubune* 湯船 'bathtub', both *yumaki* 湯巻 and the slang *yumoji* 湯文字 (lit. "hot water letter") mean 'loincloth (for the bath)', *yu-agari* 湯上がり 'after the bath; bathrobe', and *agari-yu* 上がり湯 (cf. previous word), *oka-yu* 陸湯, and *kakari-yu* 掛かり湯 all mean 'hot water (to pour on oneself) outside the bathtub'.

The third meaning of 'hot spring' for *yu* is, like the second meaning of 'hot bath', usually expressed with a more common word, *onsen* 温泉 'hot/thermal spring, hot well'. This *on* 温 actually means 'warm' rather than 'hot' (v. 2.2), but *onsen* means 'hot spring' and not 'warm spring'. Some *yu*-words that refer to hot springs are the slang *yuba* 湯場 'hot spring', *yu-no-hana* 湯の花 (lit. "hot water flower") 'incrustations of hot spring water, geyserite', and both *yuguchi* 湯口 and *yumoto* 湯元 mean 'source of a hot spring'.

The medicinal applications of 'hot water' are seen in words for the fourth and fifth meanings of 'medicated bath' and 'decoction, infusion', respectively. Some words in this morphological group are *kusuri-yu* 薬湯 'medicated bath' (cf. the reverse *tōyaku* 湯薬 'infusion, decoction'),

3) Both this and *asa-buro* 朝風呂 'morning bath' are semantically marked in opposition to the usual unmarked 'evening bath'.

shio-yu 塩湯 'brine bath', and *wakashi-yu* 沸かし湯 'heated mineral bath'. On the other hand there are several words which refer to unhealthy effects of bathing, such as *yu-zame* 湯冷め 'chill after a bath'⁴⁾, *yu-zukare* 湯疲れ 'fatigue from too much bath-taking', *yu-yase suru* 湯痩せする 'lose weight owing to frequent hot baths', and both *yuke ni ataru* 湯気に当る and *yu-atari suru* 湯あたりする mean 'become ill from taking baths too long/often'.

The seventh meaning of 'molten metal (for casting)' for *yu* is only used in a few special terms such as *yu-damari* 湯溜り 'crucible', or *yu-mizo* 湯溝 or *yu-michi* 湯道 '(sprue) runner'.

1.3 The Etymology of *Yu*

The etymological origins of *yu* 'hot water' are not certain. This is not unusual because a great deal of etymologizing in Japanese is more of a guessing game than a linguistic study. The *Nihon Kokugo Daijiten* lists five "etymologies" that have been proposed for *yu*:

- (A) reversal of *izu* 出 'going out (of a hot spring)'
- (B) *yu* 湧 'gush out, bubble up'
- (C) abbreviation of *hi-ayu-mizu* 火肖水 ("fire-like-water")
- (D) *yu* 斎 'spiritual purification'
- (E) words with *yu-* meaning 'relax, ease'

Taking these five proposals in order, (A) is very unlikely; even though the semantics of 'hot water gushing out (of a hot spring)' is reasonable,⁵⁾ the word written 出 meaning 'go out' is pronouncable as *shi*, *shutsu*, *dasu*, *idasu*, or *deru*, but extremely rarely as *izu*—even then, how does

4) Cf. *yu-zamashi* 湯冷まし 'boiled water' which is defined in Kenkyusha as the overliteral "cooled hot water."

5) There is an archaic word *ide-yu* 出湯 for 'hot spring'.

one obtain *yu* from a "reversal" of *izu*? Etymology (B) is based upon a word that is closely related to *yu* 湯 'hot water': 湧 (also written 涌) means 'gush forth/up/out, bubble well up'—but the pronunciation of *yu* (and that of *yō*) comes from Chinese, the native Japanese pronunciation of 湧 is *waku* (e.g., *waki-deru* 湧出 'gush out'). Etymology (C) is based upon a "made-up" word of *hi-ayu-mizu* 火肖水 (lit. "fire-like-water")⁶⁾ which is not attested. Etymology (D) is the most possible of the five, and this is discussed in detail below. The last proposal (E) is that *yu* 'hot water' is related to a set of words with *yu*-initials such as *yurumu* 緩 'relax, loose, slow' and *yuttari* 寛 'relax, ease'—but this relation between soaking in 'hot water' causing one's body to 'relax, loosen up' is more physiological than etymological.

The only one of these five "etymologies" that is feasible on both phonological and semantic grounds is (D), that *yu* 湯 'hot water' is related to *yu* 斎 'spiritual/religious purification'. This character 斎 is used to write a word meaning 'purification; abstinence' and pronounced *yu* (*imu, imi, or itsuku*) in native Japanese or *sai* (*sei*) in Sino-Japanese. Umegaki Minoru 榎垣実 wrote an article (1976)⁷⁾ about this etymological relationship between *yu* 湯 'hot water' and *yu* 斎 'spiritual purification' which was first proposed in the *Wakunkan* 和訓栞 (1830). Umegaki noted that *yu* 斎 meant both 'purification, ablution (esp. of a corpse)' and 'religious purification; abstinence (esp. by a shamaness)'—and in both of these senses, *yu* 'hot water' was important.⁸⁾

6) The English slang *firewater* and the Japanese *kashu* 火酒 both mean 'liquor'.

7) Umegaki's article begins with a Manzai joke about: "How do you say *mizu* 水 in English?" "Water." "And how do you say *yu* 湯 in English?" "Water." Another bilingual joke is seen in the advertising slogan for a brand of bath-salts: "I love *yu*."

He proposed that in some early stage of the Japanese language there was a word *yukawa-mizu* 斎用水 'purificatory water',⁹⁾ and this was first simplified into *yu-mizu* 斎水 and then into *yu* 湯 'purificatory/hot water'. The meaning later specialized to 'hot water' and this may have been influenced by the Chinese character 湯 (v. 1.4). Ishikami Katashi 石上堅 (1983: 1373-4) agrees that *yu* 湯 'hot water' came from *yu* 斎 'spiritual purification'.¹⁰⁾

The fault with this theory that *yu* 'hot water' derives from *yu* 'spiritual purification' is that it is a case of putting the "cart before the horse." It is practically a linguistic universal that abstract words/meanings develop from concrete words/meanings, and not the other way around. The meaning of 'spiritual purification' is quite sophisticated and abstract, while that of 'hot water' is basic and concrete. Thus, while it is very likely that the word *yu* 斎 'spiritual purification' (and perhaps the word *yuderu* 茹でる 'boil', v. 1.5) developed from the more basic word *yu* 湯 'hot water'—it is very unlikely that the etymology went from abstract to concrete.

Therefore, all five of the etymological proposals that have been made for *yu* 湯 'hot water' can be dismissed for reasons that are phonological

8) The earliest reference to this is probably in the *Wei Chih* 魏志 (a Chinese dynastic history written in the 3rd century A. D.) account of Japan: "When the funeral is over, all members of the whole family go into the water to cleanse themselves in a bath of purification." (tr. Tsunoda and Goodrich 1951: 16).

9) This *yukawa-mizu* 斎用水 is not attested, but there are other words found in early texts such as *yu-niwa* 斎庭 'garden for performing ablutions' and *yukawa-ami* 斎川浴 'purificatory washing in river water' (also written 沐浴), cf. the modern *saikai-mokuyoyu* 斎戒沐浴 'ablutions for purification'.

10) Another word that may also be related is *yukan* 湯灌 'washing (a corpse) for burial'.

[(A) and (B)], morphological [(C)], or semantic and diachronic [(D) and (E)]. The major shortcoming of most etymological studies of Japanese words is that the origins of the Japanese language are not well understood. There are various theories of Japanese as an Altaic, Austronesian, Korean, Dravidian, and even Indo-European language, but none of these theories has been proved. Paul K. Benedict is currently working on a revolutionary theory of Japanese as an Austro-Tai, or more specifically as Austro-Japanese, language.¹¹⁾

Benedict has proposed to the author that the word *yu* 湯 'hot water' derives from a Proto-Austro-Japanese root of **lihu* 'steam; hot water'. He believes that this root is also evidenced by the Proto-Paiwanic (a Formosan group) word **lihu* 'steam; vapor'. Phonologically, the Japanese *yu* shows a "canonical reduction" of the root **lihu* 'steam; vapor' by elision of the medial *-h- and the final *-l, and by the initial *l- (this /l/ is a velar/retroflex, as distinct from the usual dental /l/) going to *y- since *r- is lacking in Japanese. This resulted in a **yi* which as a non-Japanese form was simplified further to *yu*. Benedict has further proposed that the Japanese *yuge* 湯気 'steam' developed from the same **lihu* root for 'steam; hot water', perhaps with the -ge coming from a later Chinese influence.¹²⁾ This novel theory of Austro-Japanese is currently in progress, but when completed it will revolutionize the linguistic understanding of Japanese.

11) Within this framework, the Austro-Tai language stock has four main branches: Miao-Yao, Kadai (Tai, etc.), Austronesian, and Austro-Japanese.

12) Benedict has also proposed that the Japanese *mizu* 水 'water' comes from a root of *(*m*) *bidzug* 'water; juice'. The modern *mizu* comes from Old Japanese *midu*, and this came from *(*m*) *bidzug* with the drop of the final *-q, the palatal *dʒ going to *d* (which went to *z*). This *(*m*) *b-* is an "optional nasal increment" stop with **mb* going to **m*.

1.4 The Graphics of Yu

The Chinese character 湯 is used to write the Japanese word *yu* 'hot water'; but in modern Chinese the pronunciations and meanings of this 湯 are:

- (1) *tāng* 'hot liquid hot water, soup, decoction, gravy' and *Tang* 'a surname'¹³⁾
- (2) *tàng* 'boil, scald (cf. *tàng* 燙); reckless (cf. *tàng* 暢)'
- (3) *shāng* 'bubbling; amply flowing (esp. waves, in binom 湯湯)
- (4) *yáng* 'sun coming out' (cf. *yáng* 陽 and *yāng* 陽)

These Chinese meanings of the character 湯 are considerably different from the Japanese.

The earliest recorded Chinese usages of 湯 are on Shang oracle inscriptions (c. 12th century B. C.) where it was used in the sense of the surname. The binom *shāng-shāng* 湯湯 meaning 'bubbling/flowing water' was used in early Zhou texts (e.g., *Shijing*; c. 11th-7th centuries B. C.). It seems that the earliest extant use of *tāng* 湯 in the meaning of 'hot water' is in the Confucian *Analects* (c. 450 B. C.) which has the phrase 探湯 'putting (a finger/hand) into hot water' used as a metaphor for cautiousness.¹⁴⁾ And in Mencius (c. 290 B. C.) there is a parallelism between *tāng* 湯 'hot water/liquid' and *shuǐ* 水 'water' used to mean 'cold liquid'; Legge's translation is "In winter

- 13) This name Tang was notably that of the founder of the Shang dynasty, also known as 成湯 or 大乙, supposed to have lived in the 18th century B. C. In modern Chinese, this is found in place names of hot springs.
- 14) The ancient practice of *kugatachi* 探湯 'hot water trial (to determine which of two parties is telling the truth)' is mentioned in the *Nihon Shoki* 日本書紀 (c. 720).

we drink things hot, in summer we drink things cold."

In archaic Chinese the usual morphological pattern was for one word to be written with one character,¹⁵⁾ but in later stages of Chinese the predominant word-form was the compound. In modern Chinese, there are two compounds that both mean 'hot water': *rèshuǐ* 熱水 (lit. "hot water") and *kāishuǐ* 開水 (lit. "open water"). The former *rèshuǐ* 熱水 'hot water' is an old compound, and dates back to at least the 2nd century A. D. (where it is the definition of *tāng* 湯 in the *Shuowen*). The latter *kāishuǐ* 開水 'hot water' uses *kāi* 開 'open' in a specialized sense of 'hot (water)' and is a fairly modern construction.¹⁶⁾

Since modern Chinese has these two synonyms for 'hot water'—*rèshuǐ* 熱水 and *kāishuǐ* 開水—the old word *tāng* 湯 is only used in a few "frozen" words (if that is not a thermally mixed metaphor) such as *tāngmiàn* 湯麵 'noodle soup', *tāngchí* 湯匙 'soup spoon', and *tāngyào* 湯藥 or *tāngjì* 湯劑 both '(medicinal) decoction/infusion'. Japanese still uses the character 湯 for *yu* 'hot water', but has not developed a compound for 'hot water'. Neither 熱水 nor 開水 is used in Japanese.

The pronunciation of 湯 is *yu* in Japanese, but the Chinese *tang* led to two different Japanese derivations of *tō* and *tan*. There are only a few words with these Sino-Japanese pronunciations. For *tō*, there is *tōji* 湯治 'hot springs cure/treatment', *tōyaku* 湯藥 'infusion, decoction', *nettō* 熱湯 'boiling water', *sentō* 錢湯 'public bath', and *hannya-tō* 般若湯 'sake'.¹⁷⁾ And for the pronunciation of *tan*, there is

15) There was another word which was nearly synonymous, *nuǎn* 煖 'hot water', cf. *nuǎn* 暖 'warm'.

16) The *Shuowen* definition of *yāng* 易 (the phonetic in 湯) is *kāi* 開 'open'. The semantic relationship is along lines of 'hot water' being 'opened up' or 'boiling freely'.

17) This *hannya-tō* 般若湯 is a Buddhist priests' euphemism for 'sake' and is derived from *hannya* 般若 (from Sanskrit *prajna*) 'wisdom'.

tanmen 湯麵 'Chinese noodles and vegetables' and *yutanpo* 湯湯婆 'hot water bottle/bag'. This last word has 湯 twice, pronounced both as *yu* and *tan*. This is a perfect example of what is called *yutō-yomi* 湯桶訓 'pronouncing a word with a peculiar mixture of Japanese and Chinese pronunciations', and this comes from *yutō* 湯桶 'hot water pail' that also has a Japanese pronunciation (*kun-yomi*) of *yu* and a Chinese one (*on-yomi*) of *tō*.

1.5 The Syntax of *Yu*

The most important syntactic construction for *yu* 'hot water' is *yu o wakasu* 湯を沸かす 'boil water; prepare a bath'. This phrase literally means "boil hot water"—to literally "boil water" **mizu o wakasu* 水を沸かす is not grammatical. The verb *wakasu* 沸かす 'boil' is peculiarly restricted to the resultant object of *yu* 'hot water' instead of the physical object of *mizu* 'water'. In thermodynamic fact, and in most other languages, one "boils water" to result in "hot/boiling water," but not in Japanese.

Morita Yoshiyuki 森田良行 wrote an article (1981) about why the Japanese expression for 'boil water, is *yu o wakasu* 湯を沸かす and not **mizu o wakasu* 水を沸かす. He says that *wakasu* 沸かす 'to boil' is in a special verbal category in which the direct object refers to the result of the verb, not the physical object upon which the verb operates. Morita gives a similar example of the verb *taku* 焚く 'burn; build a fire; cook'. In the basic meaning of 'burn', *taku* can have objects such as coal (*sekitan o taku* 石炭を焚く 'burn coal') or incense (*kō o taku* 香を焚く 'burn incense'). But in the extended meanings, *taku* can have objects such as fire (*hi o taku* 火を焚く 'kindle a fire'), a stove (*stōbu o taku* ストーブを焚く 'make a fire in a stove'), or a bath (*furo o taku* 風呂を焚く 'make/heat a bath'). This *taku* also has an extended meaning

of 'boil; cook' (sometimes written with another character 炊 *taku*, *kashigu*) especially with the object of rice (*meshi o taku* 飯を焚く 'boil/cook rice; cook food in general'). Logically, one can no more say "burn rice" to mean 'cook rice' than one can say "boil hot water" to mean 'boil water'; but idiomatic verbs such as *taku* 焚く and *wakasu* 沸かす need not be "logical."¹⁸⁾

The Japanese syntactic quirk of "boil hot water" does not have a parallel of "freeze ice." The verb 'boil' contrasts semantically with 'freeze', and Japanese has both an intransitive *kōru* 凍る (e.g., *mizu ga kōru* 水が凍る 'water freezes') and a transitive *kōraseru* 凍らせる (e.g., *mizu o kōraseru* 水を凍らせる 'to freeze water'). Unlike the grammar of *yu o wakasu* 湯を沸かす (lit. "boil hot water") 'boil water', the grammar of *mizu o kōraseru* 水を凍らせる 'freeze water' is logically consistent with fact. There is no expression of "freeze ice" such as **kōri o kōraseru* 水を凍らせる in Japanese.

A language can optionally mark divisions of a verb for 'boil' between transitive (e.g., to boil something) and intransitive (e.g., something boils). Different languages treat this division in different ways: there can be one word such as the English *boil* (v.t. and v.i.), marked distinctions such as the French *bouillir* (v.i.) and *faire bouillir* (v.t.), or two separate words such as the Latin *coquere* (v.t.) and *fervere* (v.i.). In Japanese, the verbs for 'boil' are distinguished between transitive (*wakasu* 沸かす) and intransitive (*waku* 沸く). Another verb especially applies to a 'rolling/ seething boil', and this is likewise distinguished between transitive (*futtō saseru* 沸騰させる

18) In Chinese, the expression for 'boil water' is *shāoshuǐ* 烧水 and this *shāo* 烧 means 'burn; cook, roast; heat'. The Japanese counterpart of *yaku* 焼 means 'burn; roast; toast; bake; fire' and is not applied to water.

'to boil (something)') and intransitive (*futtō suru* 沸騰する 'boil').¹⁹⁾

In addition to syntactic distinctions of 'boil', there are also semantic distinctions that can be made. Adrienne Lehrer has studied the semantic field of cooking words in considerable detail (1963, 1972, 1974).²⁰⁾ Figure 1 shows her analysis of the English words for 'boil' (from Lehrer 1974: 31). These cooking words for 'boil' in English

Figure 1 English Cooking Words for 'Boil'

<i>boil₁</i>			
<i>simmer</i>			<i>boil₂</i>
<i>poach</i>	<i>stew</i>	<i>braise</i>	

are transitive, but what Lehrer calls *boil₁* is the general term and could also be intransitive. Lehrer (1974: 33) explains the differences among these 'boil' words as follows:

Boil₁ and its subordinate terms differ from the others in the field [of cooking words] semantically in that water or some water-based liquid must be used (wine, stock, milk), whereas the absence of water is necessary for *fry*, *broil*, *roast*, and *bake*. *Simmer* differs from *boil₂* by specifying that the liquid is just below the boiling point, without the rolling bubbles that characterize *boil₂*. The terms subordinate to *simmer* bring in highly specific aspects of meaning. *Poach* further specifies that the food is slowly cooked in water carefully so that the shape is preserved. *Stew* is applied when the food is to be cooked slowly for a

19) This *futtō* 沸騰 literally means "boil leaping up."

20) Alan Harrison 1984 modifies some of Lehrer's models, but not in reference to 'boil' words.

long time, usually until it is soft. *Braise* is even more complex—the food is first browned (i.e., quickly fried on the outside) and then allowed to cook slowly in a tightly covered pot with a small amount of water. In general, the more specific the meaning of the word, the fewer collocational possibilities there are: *boiled meat*, *boiled eggs*, *boiled vegetables* are acceptable, but ?*poached vegetables* and ?*stewed eggs* are less so. This is only partly a matter of cooking practices. If I cook vegetables at a low temperature carefully in order to preserve the shape, I still would not use *poach* to describe the process....²¹⁾

The English vocabulary for 'boil' is differentiated according both to temperature and technique, and restricted according to the food being boiled.

The Japanese words for 'boil' are also complex, but in a different manner. Kunihiro Tetsuya 国広哲弥 (1967: 117-8) contrasts four Japanese words for 'boil': *wakasu* 沸かす, *nietataseru* 煮え立せる, *niru* 煮る, and *yuderu* 茹でる. These verbs are differentiated by the objects to which they apply. *Wakasu* 沸かす refers to boiling liquids such as water, tea, coffee, milk, or oil.²²⁾ *Nietataseru* 煮え立せる is a causative verb for 'boil' that only applies to a pot or kettle of water.²³⁾ *Niru* 煮る means to 'boil (food with a small amount of liquid)' and applies to rice, potatoes, meat, fish, eggs, vegetables, and yams. *Yuderu* 茹でる means to 'boil (in a lot of water but without changing the shape of the food)', and applies to eggs, vegetables, chestnuts, yams, and octopus.

21) Lehrer (1974: 33-34) notes that *steam* is problematical. Some speakers say it is incompatible with *boil*, others include it as a type of *boil*.

22) *Wakasu* has an extended sense of 'excite, stimulate'.

23) In (esp. British) English, there is metonymy between boiling a "kettle" to mean 'water', and even using "tub" to mean 'bath'.

Yudaru 茹だる (or *udaru*) means 'be boiled/ cooked'. Lehrer (1974: 159) has taken data from Kunihiro and diagrammed the Japanese cooking words for 'boil' as shown below.

Figure 2 Japanese Cooking Words for 'Boil'

<i>niru</i> 煮る	
<i>yuderu</i> 茹でる	<i>taku</i> 炊く

Figure 2 also includes *taku* 炊く which can only apply to rice in the sense of 'boil' (though this can be extended to a more general sense of 'cook food' since rice is a basic food). Lehrer (1974: 172) notes that "The relationship of *niru* and *taku* is not completely one of class inclusion because *niru* is not used for boiling rice, that is, it contrasts with *taku*." *Niru* can be applied to rice (according to Kunihiro 1967: 117) but this is an uncommon usage.

In addition to the basic Japanese words for 'boil' given by Kunihiro and Lehrer, there are some others. The word *yu* 湯 'hot water' has specializations of *yu-gaku* 湯搔く 'scald; parboil', *yu-ni suru* 湯煮する 'boil, poach', *yu-daki suru* 湯炊する 'cook (rice) in boiling water', and *yubiku* 湯引く 'parboil'.²⁴⁾ The word *senjiru* 煎じる means 'boil' in the sense of 'decoct, infuse', e.g. *senjigusuri* 煎じ薬 '(medicinal) decoction, infusion'.

The syntax of *yu* 湯 'hot water' is not only associated with these words for 'boil' such as *yu o wakasu* 湯を沸かす, there are some other common expressions. With the particle *o* を, there are: *yu o hakeru* 湯を掛ける

24) This *yubiku* 湯引く corresponds to the Chinese *taṅgyin* 湯引 (lit. "decoction and its guide") 'vehicle for a drug' (supposed to guide the medicine to the effected organs).

'put some water on to boil', and *yu o hiku* 湯を引く is an old expression for 'take a bath'.²⁵⁾ With the particle *ni* に, there are: *yu ni iku* 湯に行く 'go to take a bath', *yu ni tsukaru* 湯に浸かる 'soak in a bath', and *yu ni hairu* 湯に入る 'get into a bath; take a bath'.

2. THE SEMANTICS OF HOT WATER

The words *hot* and *water* are both in semantic fields that can be represented by scales. *Hot* is on a temperature scale with words like *cold*, and *water* in on an aqueous scale with words like *ice*. The semantics of these two scales are quite different (cf. Figures 3 and 6). Temperature words are gradable (one can say "very cold"), aqueous words are ungradable (one cannot say *"very ice"). The divisions between temperature words are indefinite and subjective (what is the line between warm and hot?); the divisions between aqueous words are definite and objective (ice is solid and water is liquid).

2.1 The Semantics of Water Words

A lexeme meaning 'water' is one of the most basic and essential words in any language. Words for 'water' are linguistically universal, but the semantics of 'water' is not.

Water commonly occurs, and is used, in all three states: solid, liquid, and gas. The physical distinctions among these states are discrete and well-known. The freezing point and boiling point of water are the benchmarks for standards of thermometrics and weights. In most languages, there are three words for the three states of water. Figure 3 shows the vocabulary for water in English.

25) This *hiku* 引く means 'pull/draw back', cf. English *draw a bath*. Japanese *mizu o hiku* 水を引く means 'draw water off (from a river/watermain, etc.)'.

Figure 3 English Words for 'Water'

SOLID	LIQUID	GAS
<i>ice</i>	<i>water</i>	<i>steam</i>

Because the liquid state of water is the most important to human life, in many languages one word (like the English *water*) is polysemous for both 'liquid water' and 'water generally; H₂O'.²⁶⁾ For the gaseous state of water, English has both *steam* and *water vapor*; *vapor* can refer to any substance in gaseous state, and *steam* usually refers to visible water vapor.

Suzuki Takao 鈴木孝夫 (1973, 1978) has used words for 'water' in

Figure 4. Suzuki's Example of 'Water' Vocabulary

	H ₂ O		
Malay	<i>ayēr</i>		
English	<i>ice</i>	<i>water</i>	
Japanese	<i>kōri</i> 'ice'	<i>mizu</i> 'cold water'	<i>yu</i> 'hot water'

different languages as an example of linguistic relativity. Figure 4 is taken from Suzuki (1973: 37 and 1978: 53) as evidence of cross-linguistic differences in 'water' vocabulary.

In Malay, Suzuki noted that there is only one basic word *ayēr* which refers to both solid and liquid water—*ayēr beku* (lit. "solidified water") is 'ice' and *ayēr panas* is 'hot water'.²⁷⁾ In English, there is the dis-

26) H₂O may be the most widely known chemical formula.

27) Suzuki has short-changed Malay vocabulary. 'Ice' can be expressed by this *ayēr beku* (from *beku* 'solid; hard; frozen; congealed') but also by *ayēr batu* (from *batu* 'stone, rock') and the loan word *ayēs* (from *ice*). *Ayēr* does not only mean 'water' (v. fn. 12), but also 'liquid; juice; fluid; drink'. Malay has two words for 'hot', *panas* 'hot (esp. from the sun)' and *hangat* 'hot (esp. in relation to humans)' and both of these can modify *ayēr*.

inction between solid *ice* and liquid *water*. And in Japanese, Suzuki gave the similar distinction between *kōri* 氷 'ice', *mizu* 水 '(cold) water', and *yu* 湯 'hot water'.

These differences among the Malay, English, and Japanese words for 'water' are a good example of the arbitrariness of linguistic divisions. Suzuki (1978: 53) says that:

If a person has lived in one language environment all his life, he tends to take the correspondance between things and words more or less for granted; he hardly looks at it with suspicion. Only by comparing one's language with others in the above fashion does one begin to understand that even such commonplace vocabulary as *mizu*, *yu*, and *kōri* actually represent arbitrary segments of a natural phenomenon dependent for their very existence on the particular language called Japanese.

The Japanese division of water between *mizu* '(cold) water' and *yu* 'hot water' is a good example of linguistic relativity and the relation between language and thought. Suzuki (1978: 54) takes a strong psycholinguistic position on the Whorfian question of linguistic relativity, and says:

Cold water, hot water, and ice are three separate independent entities in the minds of the Japanese because we project on the world of phenomena a linguistic system which distinctly separates *mizu*, *yu* and *kōri* from one another, treating each as an independent item.

Suzuki is a native speaker of Japanese, and can speak for himself; but can he speak for "the minds of the Japanese"?

Suzuki admits that while the distinction between *mizu* and *yu* is a relative one based upon a difference in temperature, the difference between

kōri and *mizu* is an objective one based on a visible difference in state (that is dependent upon temperature). He gives another example of Japanese having two words *kōri* 氷 'ice' and *tsurara* 氷柱 (lit. "ice pillar") 'icicle', while Turkish has only one word *buz* for both 'ice' and 'icicle'. Suzuki (1978: 54) jumps to the conclusion that this means "Turks do not see icicles as anything other than ice." Vocabulary can affect perception and cognition, but is it the same thing? The relation between language and thought is extremely complex and can be affected by many different factors. The reason that Malay does not have a separate word for 'ice' (as opposed to 'water') is that the people who speak Malay live in a tropical climate where ice does not freely occur. The same pattern of the word for 'ice' meaning literally "solid water" is seen in other languages; e.g., Burmese *re-khai*: and Shan *nam kam*.²⁸⁾ This is a climatic factor that affects vocabulary development, and is similar to the well-known (or hackneyed?) example of certain Eskimo languages having many words for varieties of snow.

Figure 4 does not include the vocabulary for the gaseous state of water, but Figure 5 shows this third state for Japanese.

Figure 5 Japanese Words for 'Water'

SOLID	LIQUID	GAS	
<i>kōri</i> 氷	<i>mizu</i> 水	<i>yu</i> 湯	<i>yuge</i> 湯氣

It is very interesting that the word *yu* 湯 means 'hot water' by itself, and that its compound *yuge* 湯氣 means 'steam'. *Yuge* 湯氣 literally means "hot water essence/gas/breath," and this same character 氣 is part of two less common Japanese words for 'steam': *jōki* 蒸氣 and *ki* 汽 (written with the water radical).²⁹⁾ *Yuge* 湯氣 is the most basic word for

28) These examples were provided by Paul Benedict.

29) This 湯氣 has two pronunciations: the usual *yuge* 'steam' and *yuke*

'steam' (esp. that which comes off boiling water), and the other are loan-words from Chinese that are restricted to more technical usages and meanings of 'steam' (esp. in engines or boilers).³⁰⁾ It is possible that the reason why Suzuki's Figure 4 does not include *yuge* 湯氣 'steam' is that it shows a parallel between Japanese and Malay. The Japanese *yu* 湯 'hot water' and *yuge* 湯氣 'steam' arbitrarily unify the liquid and gaseous states of water—the Malay *ayër* 'water' and *ayër beku* 'ice' arbitrarily unify the liquid and solid states of water.

From a purely theoretical standpoint, it would be advantageous for a language to have vocabulary that overtly marks the essential identity among 'ice', 'water', and 'steam'. Scientifically, these three are solid, liquid, and gaseous H₂O. English, and most other languages have three separate names for them, and this tends to obscure the identity. However, Malay has one word *ayër* that refers both to 'water' and 'ice', and Japanese has one word *yu* that refers both to 'hot water' and 'steam'. The Malay *ayër* 'water' and *ayër beku* 'ice' can be explained on the basis of a climate in which ice does not naturally occur. But what can explain the Japanese *yu* 'hot water' and *yuge* 'steam'? Japanese vocabulary on the one hand arbitrarily divides liquid water between *mizu* and *yu*, and on the other hand arbitrarily joins liquid and gaseous water with *yu* and *yuge*.

2.2 The Semantics of Temperature Words

The semantic aspects of words meaning 'hot' are much different from those meaning 'water'. The temperature scale is an excellent example of

which is only used in the expression *yuke ni ataru* 湯氣に当る 'become sick from taking baths too long/often', v. 1.2. Cf. *mizuke* 水氣 'moisture, dampness'.

30) A more specific word is *suijōki* 水蒸気 'water vapor; steam'. Two verbs for 'steam' are *yu-noshi* 湯熨 and *yu-dōshi* 湯通し.

gradable antonymy, and it has been widely discussed in semantic theory. The basic temperature scale for English is shown below.

Figure 6 Basic English Temperature Words

<i>cold</i>	<i>cool</i>	<i>lukewarm</i>	<i>warm</i>	<i>hot</i>
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The words *hot* and *cold* are antonyms at the end points of this scale, and the words *warm* and *cool* are antonyms closer to some center point. All of these words can be modified by *very* or *not very* because temperature words are gradable and relative. The center point is neither 'hot' nor 'cold', and this neutral range is described with *lukewarm* or *tepid* (for liquids) or with *mild*, *balmy*, or *temperate* (for weather). Figure 6 only shows the most basic vocabulary, but there are many other English temperature words. For the 'cold' range, there are words such as *chilly*, *nippy*, *frosty*, *icy*, *frigid*, *gelid*, *freezing*, and *biting-/bitter-/ice-cold*. And in the 'hot' range there are words such as *torrid*, *burning*, *glowing*, *blazing*, *fiery*, *scorching*, *boiling*, *scalding*, *piping*, and *smoking-/burning-/red-/white-hot*.

Kunihiro Tetsuya 国広哲弥 (1965, 1967) has studied the contrastive semantics of English and Japanese temperature words in great detail. Figure 7 (adapted from Kunihiro 1967: 15) shows the contrasts between

Figure 7 English and Japanese Temperature Words

English			Japanese	
SOLID	LIQUID	GAS	PART OF BODY	WHOLE BODY
	<i>cold</i>	<i>chilly</i>	<i>tsumetai</i> 冷たい	<i>samui</i> 寒い
	<i>cool</i>			<i>suzushii</i> 涼しい
	<i>lukewarm</i>	<i>mild</i>	<i>nurui</i> 温い	
	<i>warm</i>		<i>ataakai</i> 暖い	
	<i>hot</i>		<i>atsui</i> 熱い	<i>atsui</i> 暑い

the systemizations of the basic temperature words.³¹⁾ The biggest difference between these temperature words in English and Japanese is the basis of applicability. The English words apply according to the state of the temperature (solid, liquid, or gas) — the Japanese words apply according to the sensation of the temperature (in part of the body, or the whole body).

For the English temperature words, the basic *cold*, *cool*, *warm*, and *hot* can apply to any substance in any of the three states (e.g., *cold steel*, *cold coffee*, or *cold air*). However, the words *chilly* and *mild* are restricted to usages describing vapors or gases, especially the weather (e. g., *chilly wind*), and *lukewarm* and *tepid* are restricted in application to liquids (e.g., *lukewarm bath*). This English system in Figure 7 has a lexical gap for solids in the neutral temperature zone; there is no word to refer to solid substances that corresponds to either *lukewarm* or *tepid*.

The Japanese temperature words in Figure 7 are applicable in relation to whether the sensation of temperature is perceived in a small part of the human body or the entire body. The series of *tsumetai* 冷たい, *nurui* 温い, and *atsui* 熱い signify sensations perceived in a part of the body; the series of *samui* 寒い, *suzushii* 涼しい, and *atsui* 暑い signify sensations perceived in the whole body. The only exception to this division between part and whole bodily sensation of temperature is *ataakai* 暖い which is applicable to either.

Kunihiro (1967: 19-20) analyzes the sememes of these words as follows. *Tsumetai* 冷たい refers to lowering the temperature in a part of one's

31) Figure 7 from Kunihiro divides the temperature words with lines, but this cannot be taken to mean that the semantic boundries between these words are discrete (cf. Figure 6).

body. *Samui* 寒い is a feeling of unpleasantly low temperature all over one's body. *Suzushii* 涼しい is a pleasantly lowered temperature of the entire body, and presupposes that body temperature was above normal before this happens. *Atataakai* 暖い is the pleasant feeling of warmth—either in a part of or the entire body—when one's body temperature is restored to normal after having been below normal. *Nurui* 温い is a feeling in a part of one's body where neither raising nor lowering the temperature occurs.³²⁾ *Atsui* is written with two different characters to graphically distinguish the applicability. *Atsui* 熱い is the feeling in part of one's body when heat is added; *atsui* 暑い is the feeling all over one's body when heat is added to such an extent as to make one feel pleasant.

In correlating or translating between the English and Japanese words for temperature, roughly speaking (and within the differing systems of applicability): *tsumetai* 冷たい could correspond to *cold*, *cool*, or *chilly*; *samui* 寒い to *cold and chilly*; *suzushii* 涼しい to *cool*; *nurui* 温い to *mild and lukewarm*; *atataakai* 暖 to *warm, lukewarm, or mild*; and both *atsui* 熱い and 暑い would correspond to *hot*. Accurate dictionary definitions of these temperature words are complicated by the collocational restrictions of the Japanese words in relation to where the temperature is perceived in the body.³³⁾

Both the English and the Japanese systems of temperature words have selectional (and collocational) restrictions that result in lexical gaps. For example, one can neither say **lukewarm air* nor **samui mizu* 寒い水 because these would violate inherent restrictions. The two major areas in which gaps occur are weather temperatures and neutral tem-

32) *Nurui* differs from *lukewarm* in negative constructions. *Nuruku-nai* 温くない means above but never below 'lukewarm', *not lukewarm* means some temperature between 'lukewarm' and 'cold'.

33) Try looking these words up in dictionaries.

peratures. For weather, the English *chilly* and *mild* are usually restricted to describing relatively cool weather; the Japanese *samui* 寒い, *suzushii* 涼しい, and *atsui* 暑い cannot apply to either solids or liquids and are normally restricted to weather descriptions. The gaps for neutral temperatures are seen in the English *lukewarm* and *tepid* which can only apply to liquids; and in the Japanese *nurui* 温い which can only apply to liquids and gases. All of these gaps seem to be owing to special cultural and conversational interests in describing the weather and moderate temperatures of liquids.

How does the Japanese system of temperature words apply to water? For *mizu* 水 '(cold) water', the normally applied terms are *tsumetai* 冷たい pronounced either as *reisui* 冷水 'cold water' (esp. in *reisui-yoku* 冷水浴 'cold bath') or as *hiya-mizu* 冷水 'cold water' which has a more polite variant of *ohiya* お冷 'cold water (or sake)';³⁴⁾ *nurui-mizu* 温い水 'lukewarm water' can be slightly cooler than *onsui* 温水 'warm; lukewarm water' (esp. for a heated pool); and *ataakai-mizu* 暖い水 'warm water'. And for *yu* 湯 'hot water', the normally applied modifiers are *nurui* 温い pronounced as *ontō* 温湯 '(comfortably) warm water/bath'; *ataakai-yu* 暖い湯 'warm water/bath'; and *atsui-yu* 熱い湯 or *nettō* 熱湯 'boiling hot water'. It is interesting that the native Japanese pronunciations (*kun-yomi* 訓読) tend to refer to more moderate temperatures while the Sino-Japanese pronunciations (*on-yomi* 音読) to more extreme temperatures.³⁵⁾ For example, the identical characters 熱湯 (literally meaning "hot hot water") can either be read *atsui-yu* in *kun-yomi* or *nettō*

34) Because *hiya-mizu* is used figuratively for 'cold water' in the sense of 'unfriendly', cf. English *throw cold water on*, *ohiya* is normally used for 'cool/cold water'.

35) This was pointed out by Takahashi Toshimitsu.

in *on-yomi*; there is a slight semantic difference with *nettō* being hotter (perhaps 'scalding water') than *atsui-yu* (perhaps 'boiling water').

There are also some specialized terms for water temperatures. The upper range of 'boiling/scalding water' can be named by *nie-yu* 煮湯 (cf. the reverse *yu-nie o suru* 湯煮をする 'to boil'). When 'boiling/hot water' is allowed to cool, the result is *yu-zamashi* 湯冷し 'boiled water'. Besides the basic terms for 'lukewarm water', there is also *bi-on* 微温 (a literary word), and both *nama-atataakai* 生暖たい and *namanurui* 生温い mean 'lukewarm/tepid water' or 'warm (weather)'.³⁶⁾

Thus, *yu* 'hot water' can be modified with temperature words that not only mean 'hot' or 'warm', but also 'lukewarm', 'cool' and even 'cold'. In a Japanese sense, *yu* 'hot water' is irreversible. Once *mizu* '(cold) water' is heated to become *yu* 'hot water', it remains *yu* even when the temperature is lowered.³⁷⁾ The word *yu-zamashi* 湯冷し is literally "cooled hot water," but it means 'boiled water'. The irreversibility of *yu* is similar to the irreversibility of boiling water. Once water has been boiled, it is referred to as "boiled water" even if it is cooled (as is sometimes done to purify drinking water). In physical fact, boiling differs from heating. If a raw egg is boiled, it becomes and is called a "boiled egg," even if it is cooled. But if a raw egg is heated (but not boiled), it remains and is still called an "egg," even if it is cooled.

Hot water is thermodynamically unstable and will cool unless heat is added continuously. The word *yu* means 'hot water', but it is lin-

36) This *nama* 生 'live, fresh' is also found in *nama-mizu* 生水 'unboiled water' and *nama-jōki* 生蒸気 'live steam'.

37) As mentioned, one literally "boils hot water" rather than "boils water" in Japanese. Therefore, *mizu* can become *yu*, but *yu* cannot become *mizu*.

guistically stable. *Yu* is still called *yu* even when it is no longer hot.

3. CONCLUSIONS

The Japanese word *yu* is linguistically quite unusual, probably even unique.³⁸⁾ In other languages, "water" is 'water', but in Japanese "water" is either *mizu* 水 '(cold) water' or *yu* 湯 'hot water'. Many languages have words for "water" that mean both 'H₂O' (generally, in solid "ice", liquid "water", or gaseous "steam") and 'liquid water', but the Japanese word for "water" (*mizu* 水) means both 'H₂O' and 'cold water'. In some languages spoken in tropical climates, the word for 'ice' is derived from that for 'water'; but in Japanese the word for 'steam' is derived from that for 'hot water'.

Yu 湯 is a good illustration of how arbitrarily languages divide up reality. In general, the "real world" has very few distinctions, only gradations. The divisions and subdivisions of language impose many distinctions upon reality. A language can follow a distinction that exists in nature, but it need not necessarily follow it. On the other hand, a language can make a distinction that does not exist in nature. Kurt Baldinger (1980: 97) gives the example of the German distinction between *Haut* 'skin' and *Fell* 'hide', a distinction that is not found in either the French *peau* 'skin; hide' or the Spanish *piel* 'skin; hide'. He says that

If, in the above example, German distinguishes between *Haut* and *Fell*, and the French says *peau* in both cases, this does not mean that a Frenchman cannot distinguish between 'Haut' and 'Fell'. The reason is historical-linguistic. Latin distinguished between *cutis* and *pellis*. *Cutis* disappeared during the post-classical period for pho-

netic, and perhaps historical and cultural reasons, and *pellis* took over its meaning. The loss of a "conceptual" difference may be due to historical-linguistic causes. Therefore it is dangerous to make inferences as to the capacity of a speech community to make distinctions from a "synchronic-linguistic" vision of the world.

Baldinger's example of the arbitrary distinction between 'skin' and 'hide' is even better when extended from European to Asian languages. The Japanese word *kawa* 皮 (like the Chinese *pí* 皮 and the Malay *kulit*) means not only 'skin; hide' but also 'leather; fur; pelt; rind; peel; bark; husk; shell'. The basic sense of *kawa* 皮 is 'outer covering of a plant/ animal'. English makes various distinctions with words for plants (e.g., *rind, peel, husk, shell*) and animals (*skin, hide, leather, fur*). Japanese has one general word that can apply to all of these meanings in compound forms. *Kawa* 皮 (also pronounced *hi*)³⁸⁾ has many compounds such as *hifu* 皮膚 'skin', *jūhi* 獸皮 'hide', *kegawa* 毛皮 'fur', *namakawa* 生皮 'rawhide; pelt', *kahi* 果皮 'peel; rind; seedcase', *juhi* 樹皮 'bark', *gaihi* 外皮 'crust; shell; husk; shuck', and *usukawa* 薄皮 'thin skin; film layer; membrane; scum'.

Both 'skin' and 'bark' occur in nature, but the distinction between them is not given by nature. The vocabulary structure of a language can either unify or separate 'skin' and 'bark'. This type of distinction is metaphorical, an animal's skin is similar to a tree's bark. Whether or not a particular language includes or excludes this metaphor is arbitrary. Is it any more difficult for an English speaker to conceptualize 'skin' and 'bark' as the "same" than it is for a Japanese speaker to think of them as "different"?

38) Are there any other languages with a *yu*-like word?

39) The 'leather' sense of *kawa* 皮 is also written 革.

The Japanese word *kawa* 皮 arbitrarily unites life-form coverings; the Japanese word *yu* 湯 arbitrarily divides water temperatures. The objective differences among skin, hide, bark, and shell are much greater than the differences among hot, warm, lukewarm, cool, and cold water. The reasons why a language either does or not make a certain distinction are usually cultural reasons. German distinguishes *Haut* 'skin' and *Fell* 'hide' because of historical and cultural importance placed upon this distinction (between people and animals).⁴⁰⁾ Japanese distinguishes *yu* 'hot water' for less obvious reasons.

There are diverse reasons why *yu* 湯 means 'hot water'. Etymologically, *yu* 湯 'hot water' is related with *yuge* 湯気 'steam'. Benedict's proposal that both of these derive from an Austro-Japanese root of **lihul* is much more likely than any of the other proposals for the etymology of *yu*. Culturally, hot water has great importance in Japan. Hot water is essential not only for preparing food and tea, but also for bathing. Japanese culture closely associates physical cleanliness with metaphysical purity, and linguistically this can be seen in the words *yu* 湯 'hot water' and *yu* 斎 'spiritual purification'.⁴¹⁾ Haga Yaichi 芳賀矢一 wrote an essay (1933: 176-167) on the extreme importance of cleanliness in Japanese culture. Environmentally, both water and hot springs are abundant in Japan. One of the derived meanings of *yu* is 'hot springs', and the geothermal waters of Japan may have also been a factor behind *yu*.⁴²⁾

The linguistic aspects of *yu* meaning 'hot water' are not as important as the cognitive and communicative aspects. *Yu* has some curious se-

40) The English *skin* is the general term and applies both to humans and small animals, *hide* applies primarily to large animals.

41) A parallel is seen in *kirei* 綺麗 which means both 'pretty, lovely' and 'clean, neat'.

mantic (e.g., "lukewarm hot water") and syntactic (e.g., "boil hot water") patterns, but they are only linguistically significant. The real importance of *yu* occurs when the word is used for thought or communication. Suzuki (1978: 52) says that since *mizu* implies 'cool/cold water', "*Atsui mizu*, literally 'hot cold water', sounds unnatural because it is self-contradictory as saying a square triangle.⁴³⁾ Is **atsui mizu* unnatural? Is *yu* natural? Human languages are sometimes called "natural languages," but there is nothing natural or unnatural about a linguistic structure like *yu*.

42) Did the ancient practice of bathing in hot springs lead to the modern public baths?

43) In Suzuki's original Japanese version (1973: 36), the term 四角い三角 is more contradictory than this English translation.

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